

## AMENDMENT TO THE CLAIMS

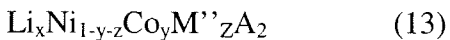
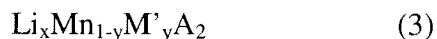
1. (Withdrawn) A rechargeable lithium battery comprising:

a positive electrode including a positive active material comprising a lithiated transition metal compound, and an additive, said additive at least one of Si, B, Ga, Ge, Ca, Mg, Sr and Ba;

a negative electrode including a carbonaceous material as an active material; and

an electrolyte including an organic solvent and a lithium salt dissolved in the organic solvent, wherein said positive active material composition is prepared by physically mixing said positive active material, a binder in said organic solvent in a form of slurry, wherein the additive is 0.01 to 10 wt% of the positive active material,

wherein the lithiated transition metal compound is selected from the group consisting of compounds represented by formulas 1 to 13:



wherein  $1.0 \leq x \leq 1.1$ ,  $0.01 \leq y \leq 0.1$ ,  $0.01 \leq z \leq 0.5$ , M' is at least one transition metal or lanthanide metal selected from the group consisting of Al, Cr, Co, Mg, La, Ce, Sr and V, M'' is at least one transition metal or lanthanide metal selected from the group consisting of Al, Cr, Mn, Fe, Mg, La, Ce, Sr and V, A is selected from O, F, S or P, and B is Ni or Co.

2-4. (Cancelled)

5. (Currently Amended) A method of making a rechargeable lithium battery comprising:

forming a positive electrode by physically mixing a positive active material with an additive to prepare a positive active material composition, the positive active material being selected from the group consisting of lithiated transition metals, and the additive at least one oxide of Si, B, Ge, Ga, Ca, Sr and Ba or at least one of Si, Ga, Ge, Ca, Sr and Ba, coating the positive active material composition on a current collector after heat treating to place the positive active material in a uniform crystalline form; and drying the current collector coated with a positive active material slurry composition;

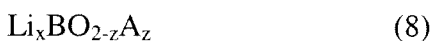
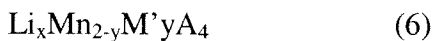
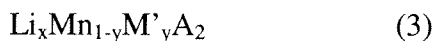
forming a negative electrode including a carbonaceous material as an active material;

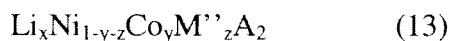
preparing an electrolyte including an organic solvent including a lithium salt dissolved in the organic solvent;

~~coating the positive active material composition on a current collector after heat treating to place the positive active material in a uniform crystalline form; and~~

~~drying the current collector coated with a positive active material slurry composition;~~

wherein the amount of the additive is 1.0 to 10 wt% of the positive active material, and the lithiated transition metal compound is selected from the group consisting of the formulas 1 to 13:





wherein  $1.0 \leq x \leq 1.1$ ,  $0.01 \leq y \leq 0.1$ ,  $0.01 \leq z \leq 0.5$ ,  $\text{M}'$  is at least one transition metal or lanthanide metal selected from the group consisting of Al, Cr, Co, Mg, La, Ce, Sr and V,  $\text{M}''$  is at least one transition metal or lanthanide metal selected from the group consisting of Al, Cr, Mn, Fe, Mg, La, Ce, Sr and V, A is selected from O, F, S or P, and B is Ni or Co.

6-7. (Cancelled)

8. (Withdrawn) The rechargeable lithium battery of claim 1, wherein said organic solvent is N-methylpyrrolidone.

9. (Previously Presented) The method of claim 5, wherein said organic solvent is N-methylpyrrolidone.

10. (Withdrawn) The positive active material composition of claim 1 wherein the lithiated transition metal compound is a compound represented by formula:  $\text{Li}_x\text{MnA}_2$

where  $1.0 \leq x \leq 1.1$ , and A is selected from O, F, S or P.

11. (Withdrawn) The positive active material composition of claim 1 wherein the lithiated transition metal compound is a compound represented by formula:  $\text{Li}_x\text{MnO}_{2-z}\text{A}_z$

where  $1.0 \leq x \leq 1.1$ ,  $0.01 \leq z \leq 0.5$ , and A is selected from O, F, S or P.

12. (Withdrawn) The positive active material composition of claim 1 wherein the lithiated transition metal compound is a compound represented by formula:  $\text{Li}_x\text{Mn}_{1-y}\text{M}'_y\text{A}_2$

where  $1.0 \leq x \leq 1.1$ ,  $0.01 \leq y \leq 0.1$ ,  $\text{M}'$  is at least one transition metal or lanthanide metal selected from the group consisting of Al, Cr, Co, Mg, La, Ce, Sr and V, and A is selected from O, F, S or P.

13. (Withdrawn) The positive active material composition of claim 1 wherein the lithiated transition metal compound is a compound represented by formula:  $\text{Li}_x\text{Mn}_2\text{A}_4$

where  $1.0 \leq x \leq 1.1$ , and A is selected from O, F, S or P.

14. (Withdrawn) The positive active material composition of claim 1 wherein the lithiated transition metal compound is a compound represented by formula:  $\text{Li}_x\text{Mn}_2\text{O}_{4-z}\text{A}_z$

where  $1.0 \leq x \leq 1.1$ ,  $0.01 \leq z \leq 0.5$ , and A is selected from O, F, S or P.

15. (Withdrawn) The positive active material composition of claim 1 wherein the lithiated transition metal compound is a compound represented by formula:  $\text{Li}_x\text{Mn}_{2-y}\text{M}'_y\text{A}_4$

where  $1.0 \leq x \leq 1.1$ ,  $0.01 \leq y \leq 0.1$ , M' is at least one transition metal or lanthanide metal selected from the group consisting of Al, Cr, Co, Mg, La, Ce, Sr and V, and A is selected from O, F, S or P.

16. (Withdrawn) The rechargeable lithium battery of claim 1 wherein the lithiated transition metal compound is a compound represented by formula:  $\text{Li}_x\text{BA}_2$

where  $1.0 \leq x \leq 1.1$ ,  $0.01 \leq z \leq 0.5$ , A is selected from O, F, S or P, and B is Ni or Co.

17. (Withdrawn) The rechargeable lithium battery of claim 1 wherein the lithiated transition metal compound is a compound represented by formula:  $\text{Li}_x\text{BO}_{2-z}\text{A}_z$

where  $1.0 \leq x \leq 1.1$ ,  $0.01 \leq z \leq 0.5$ , A is selected from O, F, S or P, and B is Ni or Co.

18. (Withdrawn) The rechargeable lithium battery of claim 1 wherein the lithiated transition metal compound is a compound represented by formula:  $\text{Li}_x\text{B}_{1-y}\text{M}''_y\text{A}_2$

where  $1.0 \leq x \leq 1.1$ ,  $0.01 \leq y \leq 0.1$ , M'' is at least one transition metal or lanthanide metal selected from the group consisting of Al, Cr, Mn, Fe, Mg, La, Ce, Sr and V, and A is selected from O, F, S or P, and B is Ni or Co.

19. (Withdrawn) The rechargeable lithium battery of claim 1 wherein the lithiated transition metal compound is a compound represented by formula:  $\text{Li}_x\text{B}_{1-y}\text{M}''_y\text{O}_{2-z}\text{A}_z$

where  $1.0 \leq x \leq 1.1$ ,  $0.01 \leq y \leq 0.1$ ,  $0.01 \leq z \leq 0.5$ , M'' is at least one transition metal or lanthanide metal selected from the group consisting of Al, Cr, Mn, Fe, Mg, La, Ce, Sr and V, and A is selected from O, F, S or P, and B is Ni or Co.

20. (Withdrawn) The rechargeable lithium battery of claim 1 wherein the lithiated transition metal compound is a compound represented by formula:  $\text{Li}_x\text{NiCoA}_2$

where  $1.0 \leq x \leq 1.1$ , and A is selected from O, F, S or P.

21. (Withdrawn) The rechargeable lithium battery of claim 1 wherein the lithiated transition metal compound is a compound represented by formula:  $\text{Li}_x\text{NiCoO}_{2-z}\text{A}_z$

where  $1.0 \leq x \leq 1.1$ ,  $0.01 \leq z \leq 0.5$ , and A is selected from O, F, S or P.

22. (Withdrawn) The rechargeable lithium battery of claim 1 wherein the lithiated transition metal compound is a compound represented by formula:  $\text{Li}_x\text{Ni}_{1-y-z}\text{Co}_y\text{M}''_z\text{A}_2$

where  $1.0 \leq x \leq 1.1$ ,  $0.01 \leq y \leq 0.1$ ,  $0.01 \leq z \leq 0.5$ , M'' is at least one transition metal or lanthanide metal selected from the group consisting of Al, Cr, Mn, Fe, Mg, La, Ce, Sr and V, and A is selected from O, F, S or P.

23. (Withdrawn) The method of claim 5 wherein the lithiated transition metal compound is a compound represented by formula:  $\text{Li}_x\text{MnA}_2$

where  $1.0 \leq x \leq 1.1$ , and A is selected from O, F, S or P.

24. (Withdrawn) The method of claim 5 wherein the lithiated transition metal compound is a compound represented by formula:  $\text{Li}_x\text{MnO}_{2-z}\text{A}_z$

where  $1.0 \leq x \leq 1.1$ ,  $0.01 \leq z \leq 0.5$ , and A is selected from O, F, S or P.

25. (Withdrawn) The method of claim 5 wherein the lithiated transition metal compound is a compound represented by formula:  $\text{Li}_x\text{Mn}_{1-y}\text{M}'_y\text{A}_2$

where  $1.0 \leq x \leq 1.1$ ,  $0.01 \leq y \leq 0.1$ ,  $0.01 \leq z \leq 0.5$ , M' is at least one transition metal or lanthanide metal selected from the group consisting of Al, Cr, Co, Mg, La, Ce, Sr and V, M'' is at least one transition metal or lanthanide metal selected from the group consisting of Al, Cr, Mn, Fe, Mg, La, Ce, Sr and V, and A is selected from O, F, S or P, and B is Ni or Co.

26. (Withdrawn) The method of claim 5 wherein the lithiated transition metal compound is a compound represented by formula:  $\text{Li}_x\text{Mn}_2\text{A}_4$

where  $1.0 \leq x \leq 1.1$ ,  $0.01 \leq y \leq 0.1$ ,  $0.01 \leq z \leq 0.5$ , M' is at least one transition metal or lanthanide metal selected from the group consisting of Al, Cr, Co, Mg, La, Ce, Sr and V, M'' is at least one transition metal or lanthanide metal selected from the group consisting of Al, Cr, Mn, Fe, Mg, La, Ce, Sr and V, and A is selected from O, F, S or P, and B is Ni or Co.

27. (Withdrawn) The method of claim 5 wherein the lithiated transition metal compound is a compound represented by formula:  $\text{Li}_x\text{Mn}_2\text{O}_{4-z}\text{A}_z$

where  $1.0 \leq x \leq 1.1$ ,  $0.01 \leq z \leq 0.5$ , and A is selected from O, F, S or P.

28. (Withdrawn) The method of claim 5 wherein the lithiated transition metal compound is a compound represented by formula:  $\text{Li}_x\text{Mn}_{2-y}\text{M}'_y\text{A}_4$

where  $1.0 \leq x \leq 1.1$ ,  $0.01 \leq y \leq 0.1$ , M' is at least one transition metal or lanthanide metal selected from the group consisting of Al, Cr, Mn, Fe, Mg, La, Ce, Sr and V, and A is selected from O, F, S or P.

29. (Previously Presented) The method of claim 5 wherein the lithiated transition metal compound is a compound represented by formula:  $\text{Li}_x\text{BA}_2$

where  $1.0 \leq x \leq 1.1$ , A is selected from O, F, S or P, and B is Ni or Co.

30 (Previously Presented) The method of claim 5 wherein the lithiated transition metal compound is a compound represented by formula:  $\text{Li}_x\text{BO}_{2-z}\text{A}_z$

where  $1.0 \leq x \leq 1.1$ ,  $0.01 \leq z \leq 0.5$ , A is selected from O, F, S or P, and B is Ni or Co.

31. (Previously Presented) The method of claim 5 wherein the lithiated transition metal compound is a compound represented by formula:  $\text{Li}_x\text{B}_{1-y}\text{M}''_y\text{A}_2$

where  $1.0 \leq x \leq 1.1$ ,  $0.01 \leq y \leq 0.1$ , M'' is at least one transition metal or lanthanide metal selected from the group consisting of Al, Cr, Mn, Fe, Mg, La, Ce, Sr and V, A is selected from O, F, S or P, and B is Ni or Co.

32. (Previously Presented) The method of claim 5 wherein the lithiated transition metal compound is a compound represented by formula:  $\text{Li}_x\text{B}_{1-y}\text{M}''_y\text{O}_{2-z}\text{A}_z$

where  $1.0 \leq x \leq 1.1$ ,  $0.01 \leq y \leq 0.1$ ,  $0.01 \leq z \leq 0.5$ , M'' is at least one transition metal or lanthanide metal selected from the group consisting of Al, Cr, Mn, Fe, Mg, La, Ce, Sr and V, A is selected from O, F, S or P, and B is Ni or Co.

33. (Previously Presented) The method of claim 5 wherein the lithiated transition metal compound is a compound represented by formula:  $\text{Li}_x\text{NiCoA}_2$

where  $1.0 \leq x \leq 1.1$ , and A is selected from O, F, S or P.

34. (Previously Presented) The method of claim 5 wherein the lithiated transition metal compound is a compound represented by formula:  $\text{Li}_x\text{NiCoO}_{2-z}\text{A}_z$

where  $1.0 \leq x \leq 1.1$ ,  $0.01 \leq z \leq 0.5$ , and A is selected from O, F, S or P.

35. (Previously Presented) The method of claim 5 wherein the lithiated transition metal compound is a compound represented by formula:  $\text{Li}_x\text{Ni}_{1-y-z}\text{Co}_y\text{M}''_z\text{A}_2$

where  $1.0 \leq x \leq 1.1$ ,  $0.01 \leq y \leq 0.1$ ,  $0.01 \leq z \leq 0.5$ ,  $\text{M}''$  is at least one transition metal or lanthanide metal selected from the group consisting of Al, Cr, Mn, Fe, Mg, La, Ce, Sr and V, and A is selected from O, F, S or P.

36-37. (Cancelled)